SCM's 'Vette Gets a Wish List

Tricks like stroker crankshafts, roller cams, and special valvetrain components make it easy to get big horsepower out of a small block

Wanted: Power, comfort, and reliability

When I decoded the SCM 1963 Split-Window Corvette, I suggested to Editor Martin that he might make his beloved 'Vette more than just a great-looking car that even he describes as "tedious and stupid" on the freeway in its present configuration, especially with the buzzy 4.11 rear end.

As discovered in the decode, the car is not a numbers-matching example, and is currently fitted with a ticking time bomb of various Chevy small-block components sourced from over a 40-year period. I knew it was only a matter of time before Martin phoned and asked that all-important question: "Colin, what would you do if this was *your* 'Vette?"

VISIONS OF RELIABILITY

Martin confided in me that he has visions of enduring long-distance road rallies and tours in the car, and perhaps even shipping it to Europe to run in the regularity sections of events like the Modena Cento Ore Classic and the Tour Auto. As Chevy mechanics are a little harder to find at the European AGIP stations, my goals were reliability, performance, and a modicum of comfort. Is such a thing possible in a 43-year-old Corvette? You bet.

As it appears to be an original 327-ci/340-hp car (with an artificial heart implant from a mechanical baboon), the first order of business is to make it look correct under the hood. While not crucial, I would use a proper casting number and date-coded 327/340 block as the basis of the upgrade.

Any rebuildable era-correct block would work, perhaps even the one currently fitted. Take the block of choice along with a pair of original 340-hp heads (easily sourced through Corvette parts specialists or ads in Hemmings Motor News) and the original 340-hp aluminum intake manifold on the car now to a reputable engine builder. Emphasis on the word reputable.

I would also get the appropriate 340-hp Holley carb and correct distributor. There are lots of choices when rebuilding a small block Chevy, and the direction I would go is a strong, dependable engine with good "grunt" and around 350 real horsepower. Technology has advanced to where tricks abound to get big horsepower and make it user-friendly with items like stroker crankshafts, roller cams, and special valvetrain components.

MINIMAL TEETHING ISSUES

For the SCM 'Vette, I recommend a nice 9.5:1 or so compression "pump gas" motor, which any good engine shop can build and test and tune on an engine dyno. Another must is an electronic ignition conversion to eliminate the points in the stock distributor—see www.pertronix.com for one example. All these things will lead to a nice plug-and-play installation with minimal teething issues.

Along those lines, an upgrade to a high-efficiency radiator, a new high-torque starter and a high-output alternator are worthy moves.

Before the motor goes in, it should be dressed and detailed to look bone stock, using the right ignition shielding, air cleaner, and all bolt-on components including correct 340-hp exhaust manifolds leading to a good exhaust system. This will consume around $15,000 of Martin's money, with the engine done, detailed, and in the car.

Next is the most radical modification I will suggest—a Tremec T-5 five-speed transmission in place of the original T-10 four-speed. This is a completely bolt-in affair with no cutting or hacking required. One of the best-engineered kits I have seen is sold by Keisler Auto. Their "PerfectFit" conversion kit comes complete with everything needed to do the conversion, including a new driveshaft, stock-look shift lever, all hardware, and complete instructions. The kit retails for $3,000. See www.keislerauto.com.

5-SPEED AND HIGHER GEARING

To take advantage of this overdrive transmission, we also need to change the existing rear end. Because the T-5 has much steeper gears in first through third than the T-10, keeping the current 4.11 gear in place would give the equivalent acceleration of a T-10 with

a 5.32 final drive. It might be fun if you had a stump removal business but is otherwise ridiculous.

Currently, 3,500 rpm in the direct drive fourth gear of the T-10 equals a cruising speed of 70 mph. With the T-5, 3,500 rpm in overdrive (.68) fifth gear would be 102 mph on paper, or just around 2,500 rpm at 70 mph—roughly a 32% reduction in revs. Now taking out that deep 4.11 gear in the differential and substituting a more logical 3.42 cog gives us 70 mph at 2,000 rpm—with acceleration that mimics a stock T-10 'Vette with a 4.43:1 gear as a result of the increased first gear multiplication in the T-5. To drop the rpm even more, a 3.08 rear gear could be installed, but it would detract from the acceleration in gears one through three.

Adding to the $3,000 transmission, figure $1,000 for a rebuilt differential with a new Positraction unit, and around $2,000 to install the works with a new clutch—bringing the grand total for everything aft of the engine to $6,000.

Now that we have power to spare and a car capable of loafing along at triple-digit speeds, we need to look at the support systems. Depending on how hard Martin will be driving the car, the original drum brakes may be just fine if serviced and treated with caution—or maybe not. If found to be inadequate, the brakes should be upgraded to discs.

GO THROUGH THE SUSPENSION

I would also highly recommend a Corvette specialist go through the suspension and thoroughly inspect everything, especially the common Corvette trouble spots. The aftermarket has figured out all the weak links in the 43 years since the '63 'Vette burst on the scene, and items such as upgraded hubs and suspension control arms are available from many vendors.

A neat upgrade would be a set of Halibrand-style mag wheels from either American Racing (called the "Salt Flat" wheel), or the more accurate re-creation from Phil Schmidt at PS Engineering (310.534.4477), either set shod with speed-rated radial tires. An exact four-wheel suspension alignment is also critical.

Once the chassis is dialed in, it will be capable of delivering good handling and a decent ride. While many will tout rack-and-pinion steering upgrades, coil-over shocks, etc., they are not necessary if the factory components are operating as intended and maintained properly. Remember, this is an old car and not a modern supercar—we are just trying to maximize our enjoyment with simple upgrades.

Many people like to retrofit modern air conditioning to vintage cars, but I do not. It adds complexity and involves cutting and modifications that are not easily reversible, plus it detracts from the original appearance. While great for certain applications, it would be counterproductive to add more heat and the drag of the compressor, plus the electrical drain, to a car being designed to run long distances at high speeds.

I would install modern heat insulation under the carpet, on the inside of the firewall, over the exhaust, and in the transmission tunnel to make the interior cooler. The exhaust manifolds and exhaust can be ceramic-coated to keep even more heat out.

However, one modern convenience that is easily reversible and stealthy is a direct-fit stereo, such as the ones offered by Custom Autosound (www.customautosound.com). They fit the factory radio hole in the dash and require no cutting. CD changers and speakers that can be tucked out of sight are also available. Auxiliary interfaces to plug in your iPod. Just make sure your music is era-correct—no hip-hop or White Stripes allowed.

All told, Martin could spend roughly $25,000 on making a reliable, swift, and enjoyable long distance Split Window 'Vette. Added to his original investment, he will have around $65,000 in a great-looking car that will return far more fun than the cash outlay would suggest.◆